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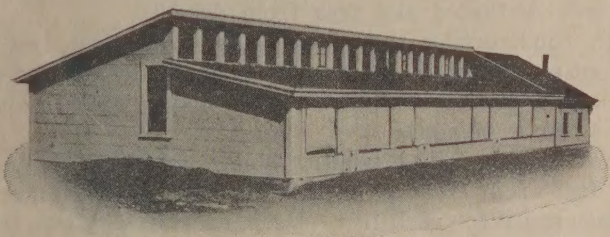

HOUSING FARM POULTRY

By

S. P. Smyth, *Assistant Professor of Poultry Husbandry*
Pren Moore, *Poultry Husbandman, University Extension Division*
John C. Wooley, *Professor of Agricultural Engineering*

COOPERATIVE EXTENSION SERVICE IN AGRICULTURE
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UNIVERSITY OF IDAHO EXTENSION
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POULTRY SECTION

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Poultry House Pointers

POULTRY HOUSES, to be satisfactory, must be light, dry, well-ventilated and free from drafts.

In construction they should be economical, yet convenient and durable. Preferably they should face the south and be placed on a southern slope to insure warmth and air and water drainage.

The well-designed poultry house should be built low, and deep from front to back, with about three square feet of floor space for each hen. Deep, narrow windows should be so arranged as to insure sunlight, reaching every part of the house. Ventilation is obtained by means of an open front, which should be covered with cheese cloth or burlap. A concrete or board floor is necessary for satisfactory results.

Home-made appliances are cheaper and usually more satisfactory than those that can be purchased. Among the necessary poultry house appliances that can be made at home are dropping boards, roosts, nests, dry mash feed hoppers, and platforms for water vessels. All fixtures should be placed off the floor to insure the maximum floor space for scratching.

Designs for houses and appliances are given, which it is felt will be useful to poultry raisers. Often the old poultry house may be greatly improved by being remodeled at small expense.

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By

S. P. SMYTH, Assistant Professor of Poultry Husbandry
PREN MOORE, Poultry Husbandman, University Extension Division
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EGG PRODUCTION, the foundation of success in the poultry business, depends upon good hens, proper housing and proper feeding. Failure to meet any of these three requirements is certain to result in low and unprofitable production. Much money is spent each year to secure well-bred flocks, many of which prove to be failures simply because of poor housing, poor feeding, or both. Many flocks are sold because of low production, and new stock is bought, when the fault lies not in the birds but in the care. The poultry business on the farm should be well balanced, and only as many fowls should be kept as can be properly housed and fed. A small flock, if properly kept, is likely to be more profitable than a larger flock, poorly housed or improperly fed.

This bulletin deals primarily with the problem of housing farm poultry, but although better housing will greatly increase production on most farms, proper breeding, culling and feeding must be practiced also before maximum production may be expected.

The cost of housing the farm flock is so small, compared with the cost of feeding, that it is poor economy to allow the hens to be improperly housed. Under present conditions it costs Idaho farmers at least three dollars properly to feed a hen for a year, where the feed is all valued at market quotations. On many farms, where the hens have free range, they pick up much waste feed and thereby materially reduce the actual expenditure for feed without reducing the production, but they cannot find proper housing conditions unless a modern poultry house is provided.

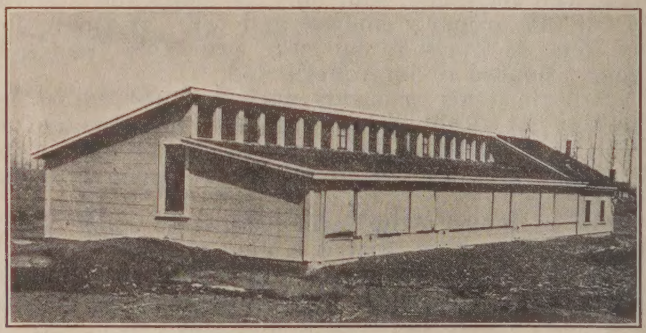
Under Idaho conditions, in normal times, a modern house as shown in the accompanying plans, to accomodate 200 hens, can be built for $300. Estimating that this house will last twelve years, one-twelfth of the cost should be charged to each year's use, and figuring interest on an average of half the original investment at 8%, there is a yearly charge of $37 for 200 hens, or 18½ cents per hen.

REQUIREMENTS OF A POULTRY HOUSE

A poultry house, to be satisfactory, must be dry, must have plenty of ventilation without drafts and must have an abundance of light. Hens kept in a damp house are likely to contract colds, roup and other diseases, which cause not only great losses through death of birds, but also losses in egg production. The house must be so constructed that the outside moisture is

kept out and so ventilated as to remove the moisture produced by the fowls. Poultry, in breathing, throw off a large quantity of moisture, which if allowed to remain in the house will soon make the atmosphere very moist and may also condense and form frost on the inside of the house. If the house is properly ventilated, no frost will form on the ceiling and walls even in the coldest weather. For this reason, as well as to supply the hens with fresh air, the house must be well ventilated. The birds' combs seldom are frozen if the atmosphere of the house is kept dry, even tho the temperature falls very low. Ventilation must be provided without drafts, as drafts on the birds are likely to cause colds.

Light in the hen house is essential because, other things being equal, egg production is in direct proportion to food consumption, and this is controlled by the length of time the hen can see to scratch and eat. By the use of artificial light



Modern Poultry House, Built on the Farm of A. B. Brown, Rupert, Idaho

in the hen house, the winter days may be lengthened to correspond to the length of the daylight of the summer days, and egg production thereby may be increased so as to compare favorably with that of spring and summer. This fact simply emphasizes the importance of constructing poultry houses so as to provide the maximum amount of light at all times. Sunlight should cover all of the floor space at some time in the day. Not only is sunlight a powerful germ destroyer, but it also adds warmth to the house and makes the hens more contented.

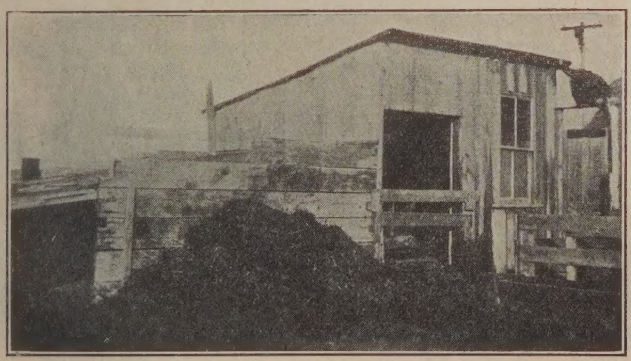
In addition to being dry, well ventilated and light, an ideal poultry house must be convenient, cheap, durable and vermin-proof. Convenience will save labor in caring for the birds and will facilitate cleaning and sanitation. The inside fixtures should be as few as possible—only those needed to care for the flock. The poultry house should not be used as a storage place for coops and boxes. Fixtures should be placed above the floor, to leave the entire floor space for scratching and to make

the cleaning of the house easier. There should be no place for the hens to hide, as a good poultryman wants to observe the condition of each hen in the house.

A house should be built as cheaply as is consistent with good construction. Many poultry houses are expensive and yet are not satisfactory. A house, to be economical, must, of course, be durable. It should be proof against small predatory animals, such as minks, weasels and skunks, as these destroy large numbers of fowls each year.

THERE'S NO "BEST HOUSE"

There are many types that suit the requirements of a good poultry house, but there is no "best house" for all conditions. Varying conditions and personal preferences require different types and sizes of house. This bulletin gives plans for some of



Mr. Brown's "Old Shack", Which Was Replaced by the Model, Half-Monitor Type, Poultry House Shown on the Opposite Page. This Is a Transformation That Could Take Place Profitably on Many Idaho Farms

the most popular types of houses and fixtures. From these plans, or combinations of them, a house can be built that will fill almost any need. It is important, however, to keep in mind when building a poultry house that there are certain requirements that must be met if it is to be satisfactory.

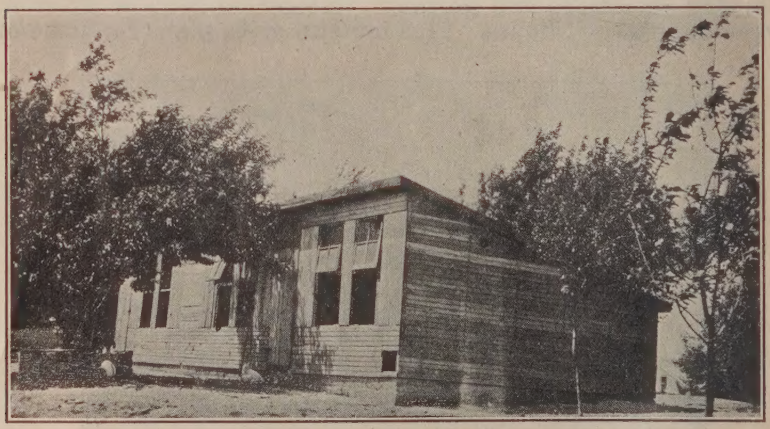
CHOOSING A LOCATION

The location of the poultry house is very important, as a poor location may counteract all the advantages of a properly planned and well constructed house. Location may have a direct bearing upon dryness. Too often the house is placed where it will be out of the way of other buildings, and be convenient to care for, without any consideration as to desirability of the site from the standpoint of poultry husbandry. Ideally, the house should be built on ground high enough so

that it will have both water drainage and air drainage. Cold, damp air has a tendency to settle to the lowest level and for that reason a poultry house should not be placed in an "air pocket."

A sandy loam is an ideal soil for poultry house location because it drains rapidly and is warmer than heavier clay soil. The house should be placed where plowing may be done on all sides of it occasionally to keep the soil sweet and sanitary.

The location selected should be sheltered as much as possible from storms and cold winds. It is not advisable to put the house on the very top of a hill, as such a spot is likely to be windswept from all directions. Under most conditions it is advisable to place the house on the south hill slope, if such



An Orchard Provides a Good Location for a Hen House

is available, as this slope is warmer and dryer in winter than any other. Other things being equal, the site should be chosen that is most convenient with relation to the water supply and to other farm buildings. An orchard, if properly situated, is a good place for a poultry house. Hens need shade in summer and they eat insects that are injurious to the orchard.

TYPE OF HOUSE

Size—The size of the house depends upon the number of fowls in the flock, the kind of poultry, the purpose for which they are kept, and the amount of time they are to be confined in the house. Generally speaking, floor space of about three square feet is recommended for each hen. The larger the flock, the less the floor space required for each fowl. If the house is properly constructed and cared for, a house 16 feet by 16 feet will care for 75 to 85 hens, and a house 20 feet by 20 feet will care for 125 to 140 hens. Over-crowding is

likely to result in colds. More hens than pullets can be housed successfully in a given area, as the pullets are more susceptible to colds than are hens, and consequently should not be crowded.

Type of Roof—There are several satisfactory types of roof for poultry houses. The three most commonly used are illustrated by the three types of house shown in this bulletin.

The Shed Type of roof probably is the type most commonly in use at the present time. It is simple to construct, throws all water to the back of the house, permits the use of high windows in front and does not expose the roof to the direct rays of the sun. Where prepared roofing paper is used it will last much longer on the north slope of a building than it will on the south slope. This type of roof is especially recommended for a house not more than 16 feet deep, although at present many houses with shed-shaped roofs are built 20 feet in depth. In building a shed roof on a house 20 feet deep it is necessary to use a center support for the roof.

The Combination Roof, as shown on the Idaho Colony house, provides the best head room with the lowest cost for material, and in addition reduces the air space to a minimum. With such a roof, the house can be built deeper than with a shed-shaped roof without using extremely long material and center supports. This type of roof sheds water to the front—an undesirable feature. The combination roof is recommended for houses more than 16 feet deep.

The Half-Monitor Type of roof provides for sunlight in the back of the house and ventilation in the extreme front, far from the roosts, which is desirable. It also furnishes good head room with a minimum of air space and at a low cost for material. For houses 20 feet deep, or deeper, the half-monitor type probably is the most desirable, but it is somewhat more difficult to construct than is the shed type. Care must be taken that the union between the front roof and the monitor part is tight, as beating rains from the south are likely to penetrate if any cracks are left. It is advisable to extend the paper roofing up the front of the house a short distance so as to make this union tight. This type of house may be cold in winter, as the glass windows, being placed at the highest point, radiate much of the heat from the house. This type of roof is especially satisfactory, however, for large houses, where hens are kept in flocks of 200 or more, and it is used to best advantage on houses at least 24 feet deep.

Shape of the House—The nearer square a house is, the cheaper it is to build. The deeper the house from front to back, the warmer it will be and the farther the hens will be from the open front, and, consequently, the less exposed to draft. Sixteen feet for shed-shaped houses and 24 feet for half-monitor houses are satisfactory depths under ordinary conditions. An extremely deep house requires too high a front, if sunlight is to reach all parts of the house at some time in the day, as it should.

Height of Walls—The walls should be just high enough to allow head room for the attendant while at work, to permit sunlight to reach the back of the house, and to give sufficient room for dropping boards and the roost in the back of the house. For a 16-foot, shed-shaped house, a 7½-foot front wall and a 4½-foot back wall permit sunlight to reach the back of the house. These dimensions provide for dropping boards high enough from the floor to permit the hens to work under them, and also allow plenty of head room. There is a tendency to build poultry houses entirely too high. Not only is this costly, but it encloses too much air space for the hens to heat. Keep the air space at the minimum requirement.

CONSTRUCTION

Foundation and Floors—Every modern poultry house should have a well-constructed floor and foundation. Foundations may be made of concrete, as shown and described on page 11, of posts set in the ground, or of runners or skids, as used with portable houses. Where the house is to be built on a permanent foundation, concrete probably is the best, as it is lasting, comparatively cheap, keeps the wind from blowing under the house, and is vermin proof. Large houses should not be made portable, as they are seldom moved. It is much better to put them on permanent foundations and in good locations when they are built. Too often, houses are made portable and set in poor places, with the intention of moving them to good locations later.

A poultry house floor, to be satisfactory, must be dry, easily cleaned, sanitary, durable and economical of construction. A dirt floor is cheap, but unsanitary and hard to clean, and is likely to be either damp or dusty. If a dirt floor is used, when the house is cleaned it is necessary to shovel out a lot of dirt that has become mixed with straw and consequently to haul in more dirt to replace that taken out. If, for any reason, it is necessary to use a dirt floor, a foundation should be put in and dirt filled in at least six inches above the outside level in order to make the floor as dry as possible. Gravel or cinder floors are somewhat better than dirt floors but they also are hard to clean and must be partly replaced after each cleaning. Such floors should be built above the outside level, as in the case of the dirt floor. A board floor is dry, fairly sanitary and easily cleaned, and the first cost is fairly cheap, but it is short-lived and, if put up off the ground, may be cold. Where a dry, concrete floor cannot be constructed economically, the board floor is the best to use. Good quality tongued and grooved boards should be used, with the joists close enough together to hold the boards firmly in place. A concrete floor is long-lived, easily cleaned and sanitary. The first cost is but little more than the cost of a good board floor, and if it is built according to directions it will be dry. Where it is possible to build a concrete floor it will be found to be the most satisfac-

tory and economical. A concrete floor always should be built on a well-drained foundation such as is described later.

Materials—The frame of the poultry house should be built as economically as possible. All that is necessary is for it to hold the boards in place, hold up the weight of the house and withstand winds. Under most conditions, the frame, excepting rafters on deep houses, should be made of 2x4-inch material. In case the house is more than 16 feet deep, the rafters should be supported in the middle by a girder or by posts. In the plans given, two types of rafter construction are shown. Either type of construction may be used on any of the houses, as both are satisfactory. The regular rafter construction as shown on the shed-shaped type of house is the most commonly used. It is easy to construct and durable, but, as commonly constructed, is likely to leave cracks where the roof joins the front and back plates. The other type of construction is recommended as being easy to build, forming a tighter union with the plates and, if built according to directions, having sufficient strength to hold up the maximum snow load that is likely ever to lie on it. This new type of construction is used only with roofing paper and solid decking and is not suitable with a shingle roof.

The walls of the poultry house should be absolutely tight, and any kind of inch lumber that will make a wall of this kind can be used satisfactorily. As a rule, six-inch flooring, or six-inch drop siding with a tongue and groove joint makes the most economical walls. Use of shiplap is not advisable, as it cannot be made tight. Second or third grade lumber, if it does not contain loose knots, can be used and is more economical than the higher priced grades. It is not advisable to make poultry house walls double thickness, except over and back of the roosts.

Prepared roofing paper laid on solid boards is tight, and for most houses is the most satisfactory roof. Shingles are not as tight as paper and are not recommended under ordinary conditions. Tin or iron roofs are cold in winter, hot in summer, and commonly sweat badly; they should not be used, therefore, on poultry houses.

Windows—Windows usually are placed in the front, the south side of the house, so as to admit sunlight and ventilation. There is no set rule as to the proportion of glass windows to open or cloth-covered windows, but a good practice is to provide about one square foot of glass windows and half as much "open window" space for each ten to fifteen square feet of floor space, depending somewhat on the size of the house, the number of birds kept and climatic conditions. The glass windows should be tall and narrow, as this shape allows the sunlight to cover a larger area of the floor. The open or cloth windows should be high enough above the floor so as to prevent a draft on the fowls. There are several ways of putting in glass windows. The two most satisfactory ways are shown in plans on pages 14 and 24. Each person can use the method

that he prefers. It is desirable to have hinged, burlap-covered frames for the "open windows", although in many cases the openings are covered with screen in summer and in severe winter weather burlap is tacked over them. Do not use muslin, or other material that will not admit air readily, on the "open windows", as the object of these windows is to furnish an abundance of fresh air.

As shown in the plans, it is advisable in most cases to have some small glass windows under the dropping boards to furnish light in that portion of the house. When hens scratch in the straw for grain, they face the light in order to see the grain when it is scratched out. If all the light is in the front of the house, they soon will scratch all the straw in the opposite direction and pile it up under the dropping boards. In houses without windows under the dropping boards, hens are more inclined to hover in the back part of the house on a cold day and not get out to work and eat. For these windows, three-light cellar sash are recommended. They should be hinged so as to open in summer for ventilation, but must be made tight for winter.

Doors—Doors should be so placed in the house that work may be done with the fewest steps, and so situated as not to interfere with the inside arrangement of the house. If the house is very long, several doors should be placed in the front, or windows used that open as doors, since these openings are necessary in cleaning the house. The door of the Idaho Colony house is placed in the north side, because, under most Idaho conditions, the wind seldom blows from the north and this arrangement makes it easier to care for the birds on windy days. Doors should be large enough for coops and other equipment to be taken in and out, but there is no advantage in having them any larger than necessary. Factory doors may be bought, but it usually is better economy to build doors of the same material as the side walls of the house.

ALTERING THE PLANS

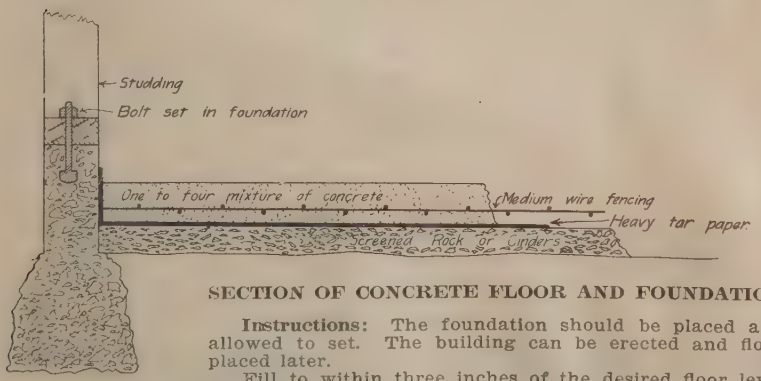
The plans presented in this bulletin will not answer the requirements of each case and it may be necessary to alter them in order that they may meet individual needs. The plans are designed to provide the essentials of a good poultry house and if changed they should not be so altered as to destroy their desirable features. These houses are planned to make use of material in even lengths of two feet, and it is economical to keep this point in mind so that any changes provide for even lengths of material. The most common lengths of material are 10, 12, 14 and 16 feet. Eighteen and 20-foot material usually costs more in proportion and should be avoided. In altering plans, be sure the house is as deep as possible and the roof is as low as possible, as these are essential features.

REMODELING THE OLD HOUSE

In many cases, the old house can be remodeled and thus the expense of building a new one can be saved. In remodeling, it is important first to have the essentials of a good house in mind and then to make the old house conform as closely as possible to these requirements. If the house is too shallow and has too high a front, it may be re-made into a half-monitor house. If it has a gable roof and is too high, a loft may be put in by constructing a slatted ceiling and covering it with straw. This takes up the moisture and reduces air space, but unless properly cared for is likely to harbor mites. If the house simply lacks light and ventilation, this defect may be corrected easily by putting in windows. Most poultry houses lack a good floor; this can easily be built. If the house is full of cracks and cold or drafty, the side walls may be covered with roofing or building paper. A leaky roof on a poultry house never should be tolerated.

PLANS AND SPECIFICATIONS

After the location meeting the requirements has been selected, the question of foundation and floor must be decided. Methods of construction of concrete and wooden floors have been discussed under the general heading of floors, and are shown in the following illustrations.

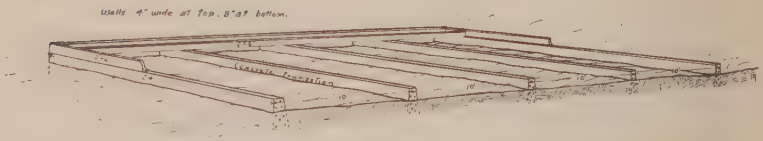


SECTION OF CONCRETE FLOOR AND FOUNDATION

Instructions: The foundation should be placed and allowed to set. The building can be erected and floor placed later.

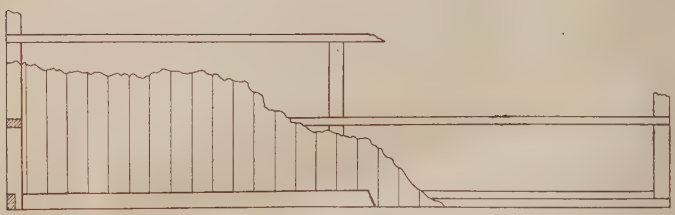
Fill to within three inches of the desired floor level with screened rock. Level carefully and tamp until solid. Place enough of the four-to-one concrete on top to level it, so the paper will not be torn. Place the paper, turning the edges up along the foundation. Lay the woven wire on the paper and fill with concrete up to the desired level.

Drain tile may be placed across the building at five-foot intervals. If there is no trouble with seepage from below, the paper and reinforcing may be omitted.

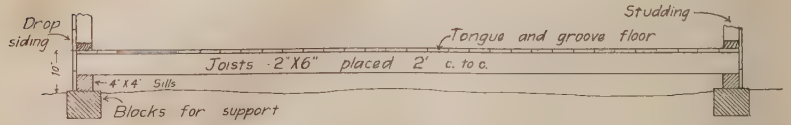


CONCRETE FOUNDATION FOR WOODEN FLOOR

If a wooden floor is desired, the above shows a concrete foundation which will give good results. The joists are laid on the concrete sills, as shown. The above is the foundation plan for the half-monitor house, described later in the bulletin.



Top View



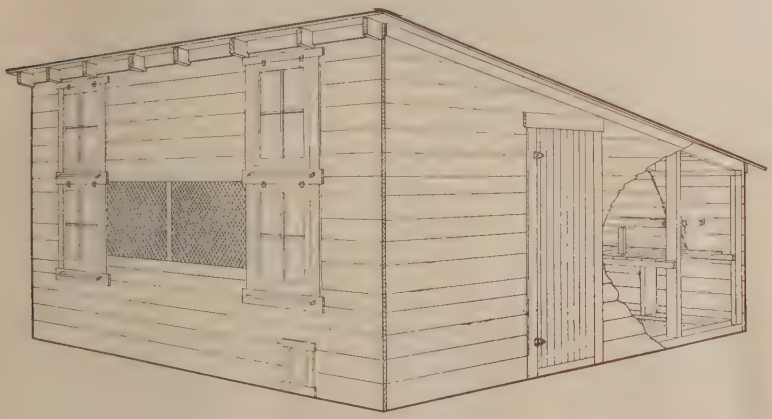
WOODEN FLOOR

This shows the construction of a wooden floor on sills 4x4 inches. These sills shold be beveled so as to act as skids for moving the house. The blocks or supports, as shown, may be of wood or of concrete. They are used to hold the skids from the ground, to keep them from decaying.

THE SHED TYPE

This house can be used with either type of floor.

In all the material lists in this bulletin are given the details of amounts of material required and uses to be made of it, together with a summary, showing the total quantity of each sort of material needed.



PERSPECTIVE OF SHED TYPE HOUSE

Material List for Concrete Floor

	Detail	Summary
Foundation 1 to 5 mixture	2½ yds. bank run gravel 12 sacks cement	2½ yds. gravel
Floor 3″ thick, 1 to 4 mixture	2½ yds. sand 16 sacks cement	2½ yds. sand 28 sacks cement
Foundation for floor	2½ yds. cinders or gravel	2½ yds. cinders or gravel
To prevent seepage	2½ sqs. tar paper	2½ sqs. tar paper
Reinforcing	64′ of 4′ wov'n wire fencing	64′ of 4′ wov'n wire fencing

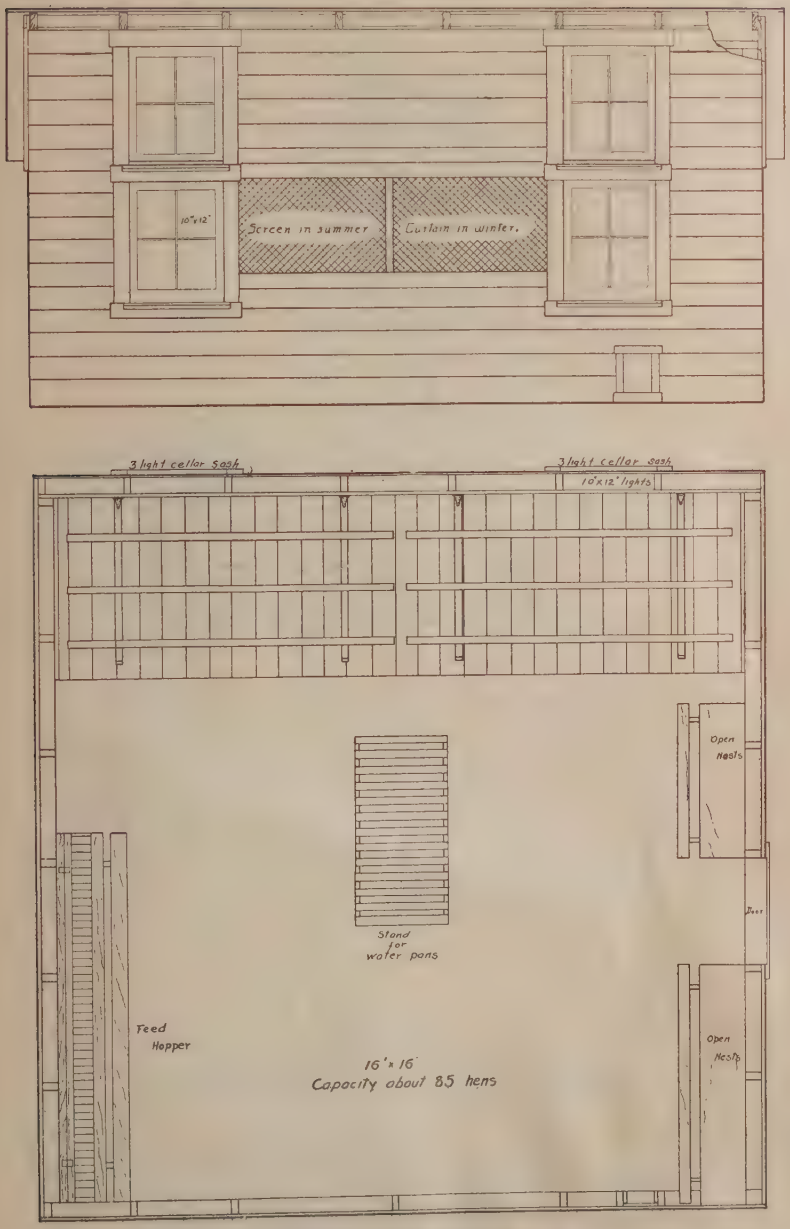
Material List for Concrete Sills and Board Floor

Sills, 3	2 yds. bank run gravel 10 sacks cement	2 yds. gravel 10 sacks cement
Joists	6 2″x6″x16′	9 2″x6″x16′
Joist supports	3 2″x6″x16′	
Floor	300 bd. ft. 6″ tongued and grooved flooring	300 bd. ft. 6″ tongued and grooved flooring

When the floor has been placed, lay a 2x4-inch sill around the outer edge, spiking or bolting it in place. Set studding on this, spacing them as shown on floor plan.

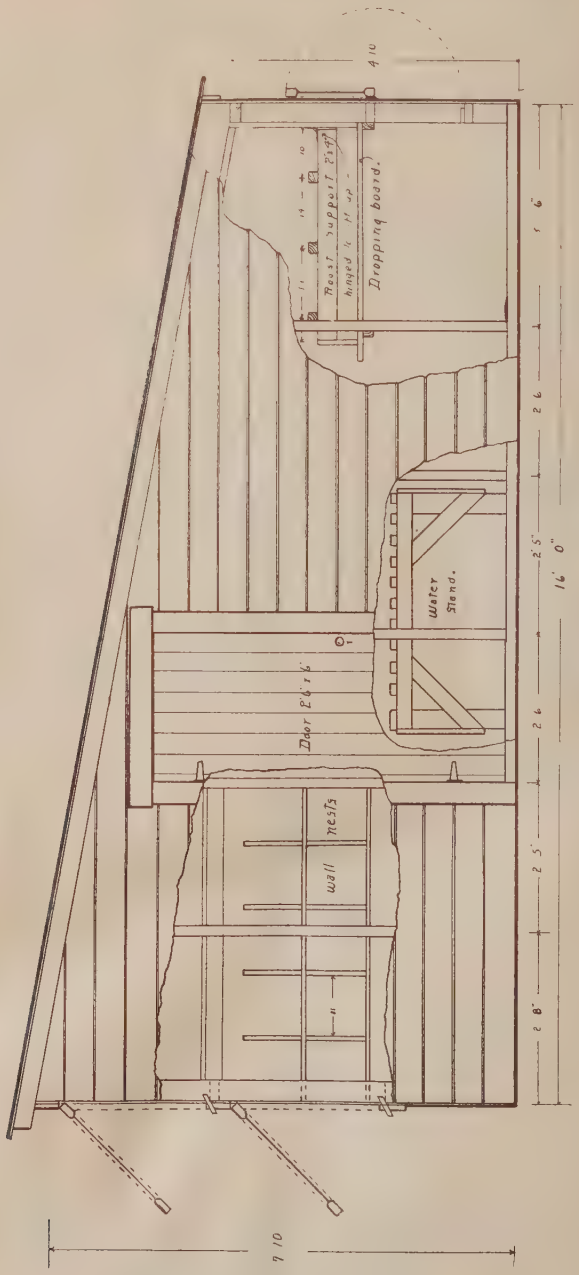
Material List Complete Above Floor

Detail				Summary
Rafters, 8		2"x6"x18'		8 2"x6"x18'
Front studding	8	2"x4"x12'	1 front and 1 back studding cuts out of each 12' piece	15 2"x4"x16' 9 2"x4"x12'
Back studding				
End studding	6	2"x4"x16'		1 2"x4"x10'
Roost poles	3	2"x2"x14'		3 2"x2"x14'
Roost cross pieces	4	2"x4"x 4'		70 1"x6"x12' shiplap
Under dropping boards	2	2"x4"x16'		480 bd. ft. tongued and grooved siding
Dropping boards Use No. 2 floor or shiplap	20	1"x6"x12'		2 1"x4"x16' 2 1"x4"x16' 5 1"x6"x12' finish for casings
Roof boards (shiplap)	50	1"x6"x12'		3 sqs. 2-ply ruberoid roofing
Front siding	4	1"x6"x16'	Tongued and grooved siding	2 pr. 6" T-hinges for roosts
Front siding	12	1"x6"x12'		4 pr. 2" butt hinges for window
Back siding	3	1"x6"x12'		3 pr. 3" butt hinges for door
Back siding	8	1"x6"x16'		1 pr. 1" butt hinges for small door
Far end siding	14	1"x6"x12'		20' of 2' poultry netting
Far end siding	6	1"x6"x10'		4 4-light 10"x12" barn sash
Front end siding	8	1"x6"x12'		2 3-light 8"x10" cellar sash
Front end siding	12	1"x6"x10'		
Sills	4	2"x4"x16'		Nails
Top plates	2	2"x4"x16'		7 lbs. 10 penny common 2½ lbs. 20 penny com. 20 lbs. 8 penny common 3 lbs. 8 penny finish



SHED TYPE HOUSE

Above: Front View. Below: Plan View.



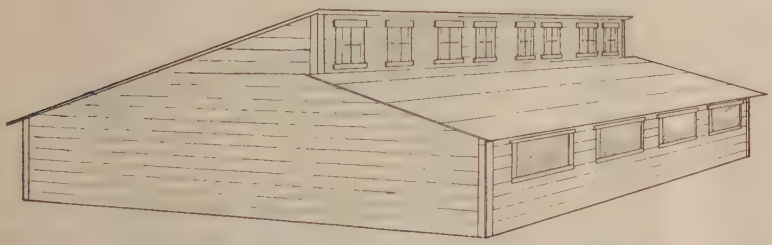
EAST END OF SHED TYPE HOUSE

HALF MONTITOR TYPE

Either type of floor may be used with this house.

Materials for Concrete Sills and Wood Floor

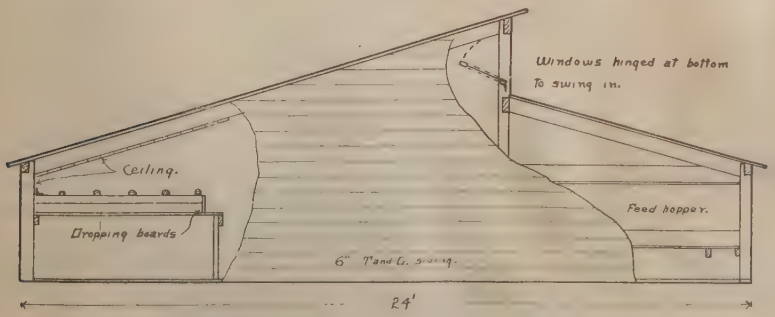
	Detail	Summary
Sills, 1 to 5 mixture	24 sacks cement 4½ yds. bank run gravel	24 sacks cement 4½ yds. gravel
Joists	36 2″x6″x10′	42 2″x6″x10′
Joist support and bridging	2 2″x6″x12′ 6 2″x6″x10′	2 2″x6″x12′
Floor	1150 bd. ft. 6″ tongued and grooved flooring	1150 bd. ft. 6″ tongued and grooved flooring



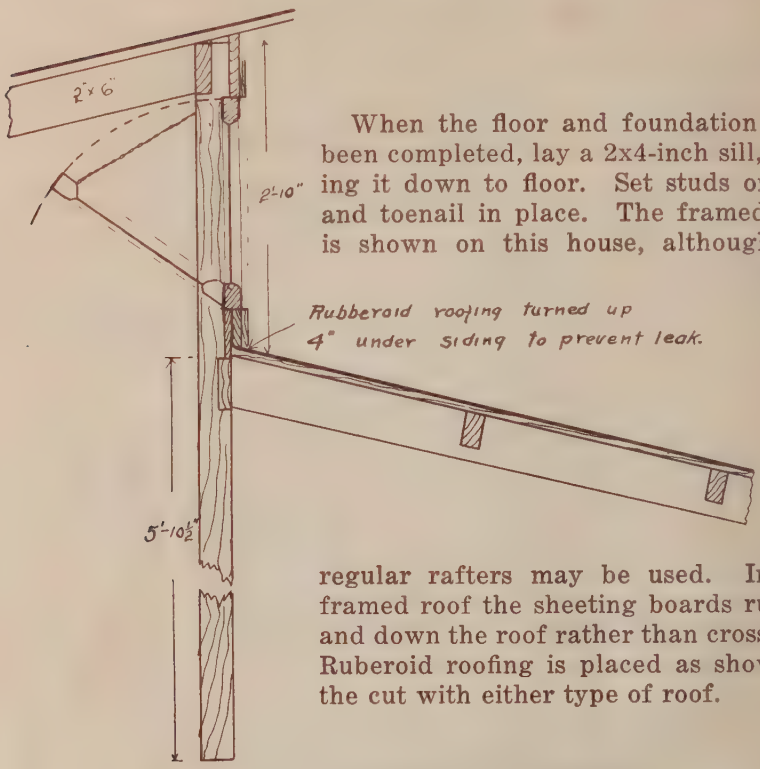
PERSPECTIVE OF HALF MONITOR HOUSE

Material for Concrete Foundation and Floor

Side walls and pillars for center posts, 1 to 5 mixture	30 sacks cement 5 yds. bank run gravel	30 sacks cement 5 yds. gravel
Floor, 1 to 4 mixture	56 sacks cement 9 yds. sand	56 sacks cement 9 yds. sand
To cut off seepage	10 squares tar paper	10 squares tar paper
Reinforcing	200 ft. 4′ woven wire fencing	200 ft. 4′ woven wire fencing
Foundation for floor	9 yds. cinders or gravel	9 yds. cinders or gravel



WEST END OF HALF MONITOR HOUSE

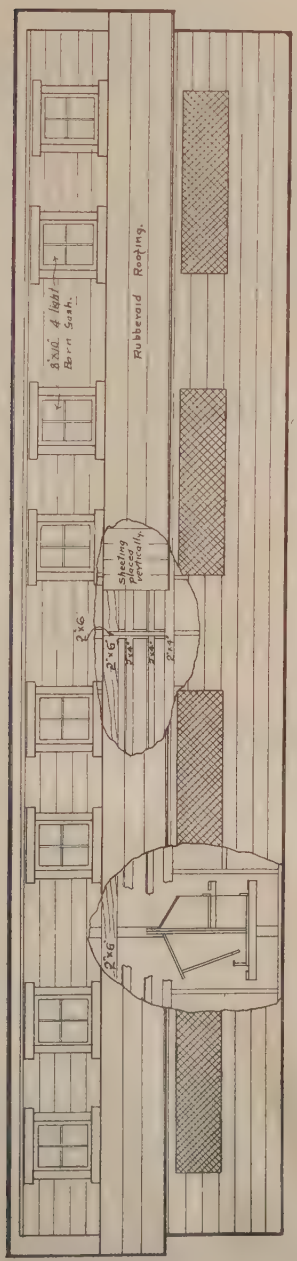


When the floor and foundation have been completed, lay a 2x4-inch sill, spiking it down to floor. Set studs on this and toenail in place. The framed roof is shown on this house, although the regular rafters may be used. In the framed roof the sheeting boards run up and down the roof rather than crosswise. Ruberoid roofing is placed as shown in the cut with either type of roof.

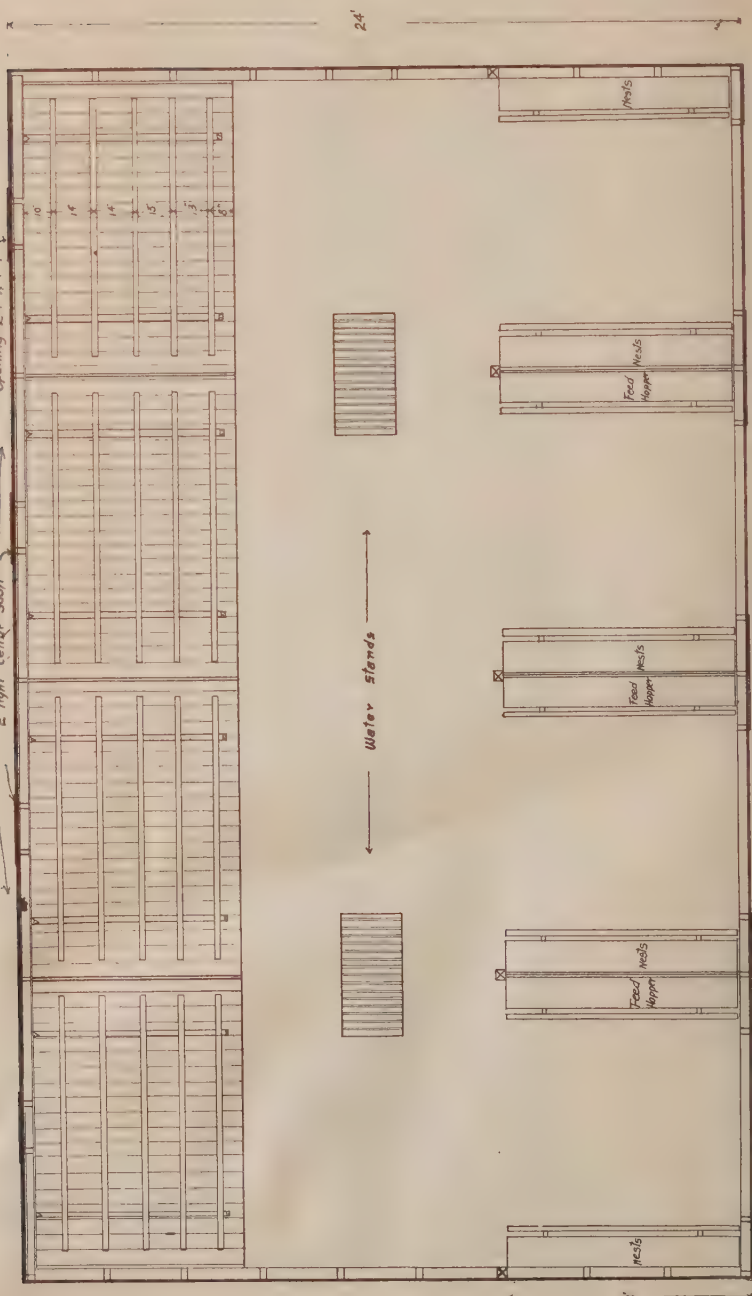
Center Post and Window Construction

Material List Complete Above Floor

	Detail	Summary
Sills	6 2"x6"x16' 4 2"x6"x 8'	3 4"x4"x10' 4 2"x6"x18'
Posts	3 4"x4"x10'	8 2"x6"x16'
Studding	4 2"x4"x10' 7 2"x4"x14' 7 2"x4"x16'	5 2"x6"x10' 20 2"x4"x16' 7 2"x4"x14'
Roost supports	2 2"x4"x16'	32 2"x4"x10'
Plates	8 2"x4"x16' 4 2"x6"x10'	11 1"x4"x16' finish 2 1"x4"x12' finish
Rafters	4 2"x6"x18' 1 2"x6"x10'	4 1"x4"x10' finish 10 2"x2"x18' finish
Frame between rafters	8 2"x4"x10' 20 2"x4"x10'	800 bd. ft. 6" tongued and grooved siding
Studding in monitor	3 2"x4"x16'	2000 bd. ft. of 2nd grade tongued and grooved sheeting or 1st grade shiplap
Siding	800 bd. ft. tongued and grooved siding	



HALF MONITOR HOUSE; SOUTH SIDE

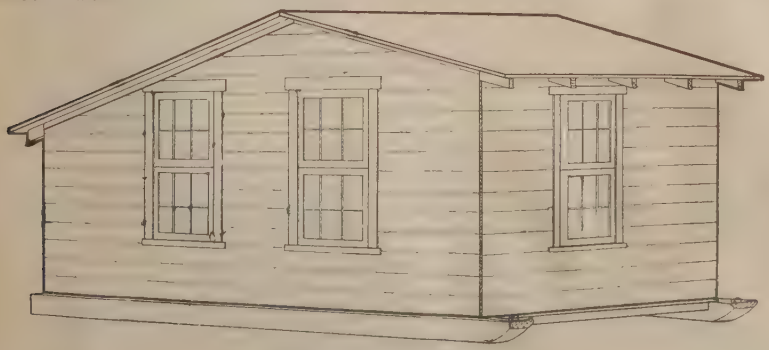


FLOOR PLAN OF HALF MONITOR HOUSE

Roof sheeting	1400 bd. ft. 2nd grade tongued and grooved or 1st grade shiplap	4	2-light cellar sash, lights 8″x10″
		8	4-light barn sash, lights 8″x10″
Window case	4 1″x4″x16′ finish	11	sqs. 2-ply ruberoid roofing
Comer boards	3 1″x4″x16′ finish		
Door case	2 1″x4″x12′	26′	of 20″ poultry netting
Case for screened opening		12	prs. 2″ butt hinges
	4 1″x4″x16′	1	pr. 6″ T-hinges
Case for north windows	4 1″x4″x10′	8	prs. 4″ T-hinges
Roosts	20 2″x2″x 9′	15	lbs. 10 penny common nails
Ceiling and dropping boards	620 bd. ft. tongued and grooved flooring or 1st grade shiplap	5	lbs. 20 penny common nails
Windows under dropping boards	4 2-light cellar sash, 8″x10″	18	lbs. 6 penny common nails
Windows in monitor	8 4-light barn sash, 8″x10″	20	lbs. 8 penny common nails
	26′ of 20″ chicken netting	8	lbs. 8 penny finish nails
	11 sqs. 2-ply ruberoid roofing		
Front windows	8 prs. 2″ butt hinges		
Lower windows	4 prs. 2″ butt hinges		
Door	1 pr. 6″ T-hinges		
Roosts	8 prs. 4″ T-hinges		
Studding and rafters	15 lbs. 10 penny nails		
Studding and rafters	5 lbs. 20 penny nails		
Siding	18 lbs. 6 penny common nails		
Sheeting and ceiling	20 lbs. 8 penny common nails		
Casings	8 lbs. 8 penny finish nails		

IDAHO COLONY HOUSE

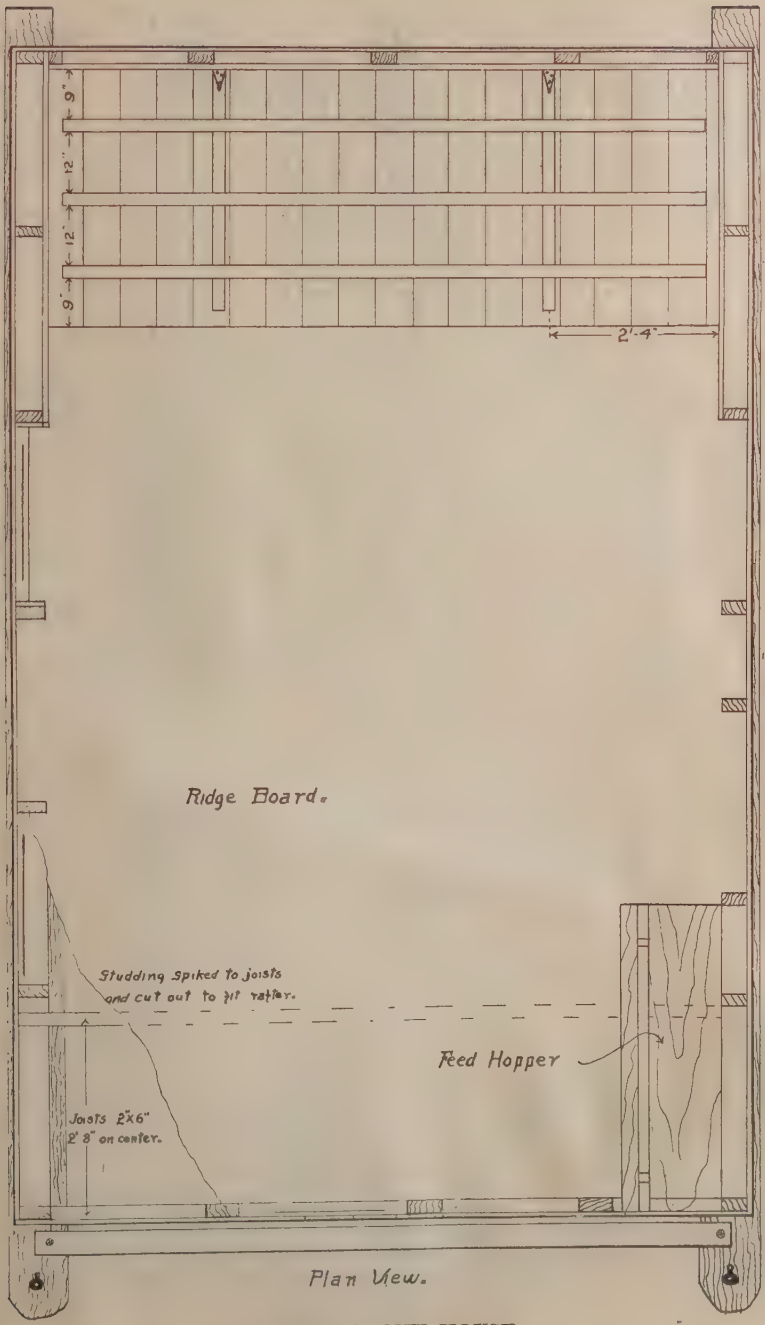
This house should be well nailed, so that it will not rack in moving. Studding should be spiked to the side of joists where possible and studding cut out so that rafters will fit in. Joists are spiked securely to skids so that the house is built into a solid unit.



THE IDAHO COLONY HOUSE

FRONT VIEW OF IDAHO COLONY HOUSE

SOUTH SIDE OF COLONY HOUSE



IDAHO COLONY HOUSE

DETAIL OF WINDOW CONSTRUCTION

Window construction in the Idaho colony house is different from such construction in the other houses. As shown above, the upper sash is hinged to the lower, to be used as a ventilator. The bottom sash is hinged at the side, so that the window may be used as a door. The top sash may be held in place by a button, as shown. The bottom sash is held by a pin.

Material List Complete, Idaho Colony House

	Detail	Summary
Skids	10" poles 18' long	2 10" poles 18' long
Braces for skids	4"x4"x10	1 4"x4"x10'
Joists	7 2"x4"x10' select	7 2"x4"x10' select
Front studding	5 2"x4"x 6'	12 2"x4"x12'
End studding	4 2"x4"x 7'	5 2"x4"x14'
	8 2"x4"x6'	4 1"x4"x14' finish
Rafters	5 2"x4"x 7'	3 1"x4"x12' finish
	5 2"x4"x12'	1 1"x4"x16' finish
Siding	250 bd. ft. tongued and grooved siding	3 2"x2"x 9'
Facia	4 1"x4"x14' finish	250 bd. ft. tongued and grooved siding
Sheeting	220 board feet shiplap	220 board feet shiplap
Flooring	200 bd. ft. tongued and grooved flooring	300 bd. ft. tongued and grooved flooring

Window case	3 1″x4″x12′ finish	2½ sqs. ruberoid roofing
Door case	1 1″x4″x16′ finish	
Roofing	2½ sqs. 2-ply ruberoid roofing	3 8-light double sash lights, 8″x10″
Dropping boards and ceiling	100 bd. ft. tongued and grooved flooring	6 pr. 2″ butt hinges
Roosts	3 2″x2″x 9′	1 pr. 4″ T-hinges
Roost support	1 2″x4″x 8′	1 pr. 6″ T-hinges
Windows	3 8-light double sash lights, 8″x10″	5 lbs. 10 penny nails
Windows	6 pr. 2″ butt hinges	2 lbs. 20 penny nails
Roosts	1 pr. 4″ T-hinges	16 lbs. 8 penny nails
Door	1 pr. 6″ T-hinges	
	5 lbs. 10-penny nails	
	2 lbs. 20 penny nails	
	16 lbs. 8 penny nails	

POULTRY HOUSE FIXTURES

No poultry house is complete until it is properly equipped, and this equipping should be done when the house is built, as it is likely to be neglected if left to be attended to later. Good equipment should be such as to add to the efficiency of the house, to reduce labor in caring for the birds, and to be simple, easily cleaned, and cheap. Most equipment should be home-made, as the patent equipment on the market is high-priced and much of it not as good as can be built at home. All appliances should be placed above the floor, so as to leave the entire floor for scratching purposes.

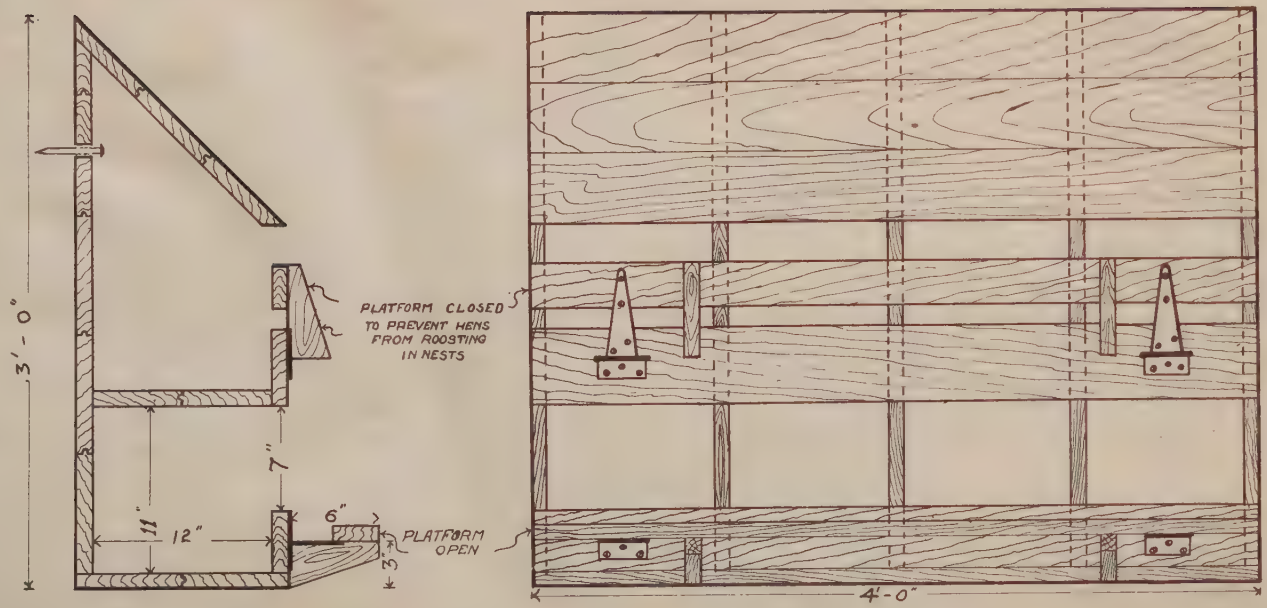
Dropping Boards and Roosts—The dropping board and roosts as shown in the plans are very satisfactory and should be included in every good poultry house. The old-style roost, built on a slant, has no place in a modern poultry house. Dropping boards make the cleaning of the house much easier and permit the use of more floor space for scratching purposes. The roosts should be put on supports and hinged as shown in the plans, as this arrangement makes the cleaning of the dropping boards easier.

Nests—Nests should be built as economically and as simply as they can be built and still be easily cleaned, and they should be of such construction as to prevent the breaking of eggs. Nests should be entered from the front or back, but never from the top. Hens like a secluded place in which to lay. A dark nest prevents hens from eating their eggs, a habit which they sometimes acquire where the broken eggs are in plain view. Several types of satisfactory nests are shown in the plans.

To facilitate cleaning, nests should be movable.

Trap nests are needed only by the specialist who is doing careful breeding work and has the time to care for them. The use of trap nests requires much labor and usually is not practical for the average poultryman.

By leaving out the windows as shown under the dropping boards, and putting the nest under the dropping boards with entrance from the back, a very desirable dark nest can be made, but it has the disadvantage of making the extreme back

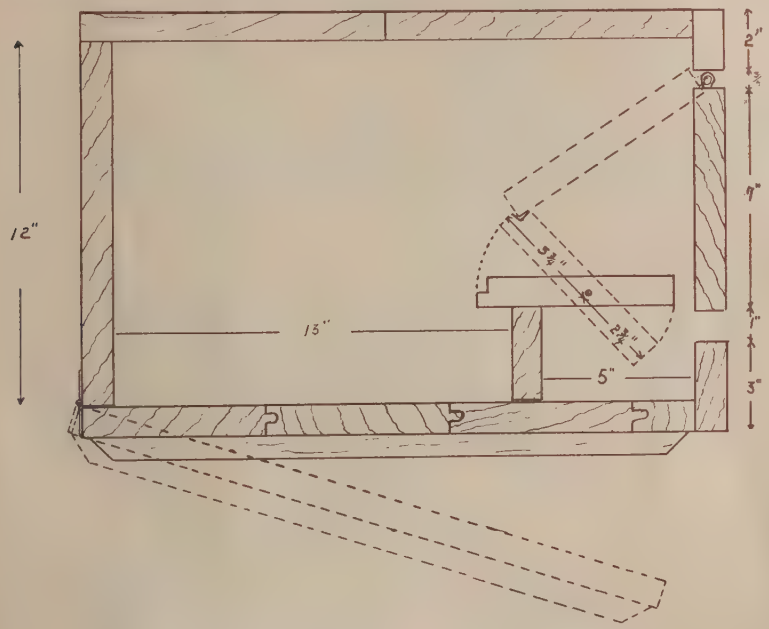


END VIEW

FRONT VIEW. Purdue Type.

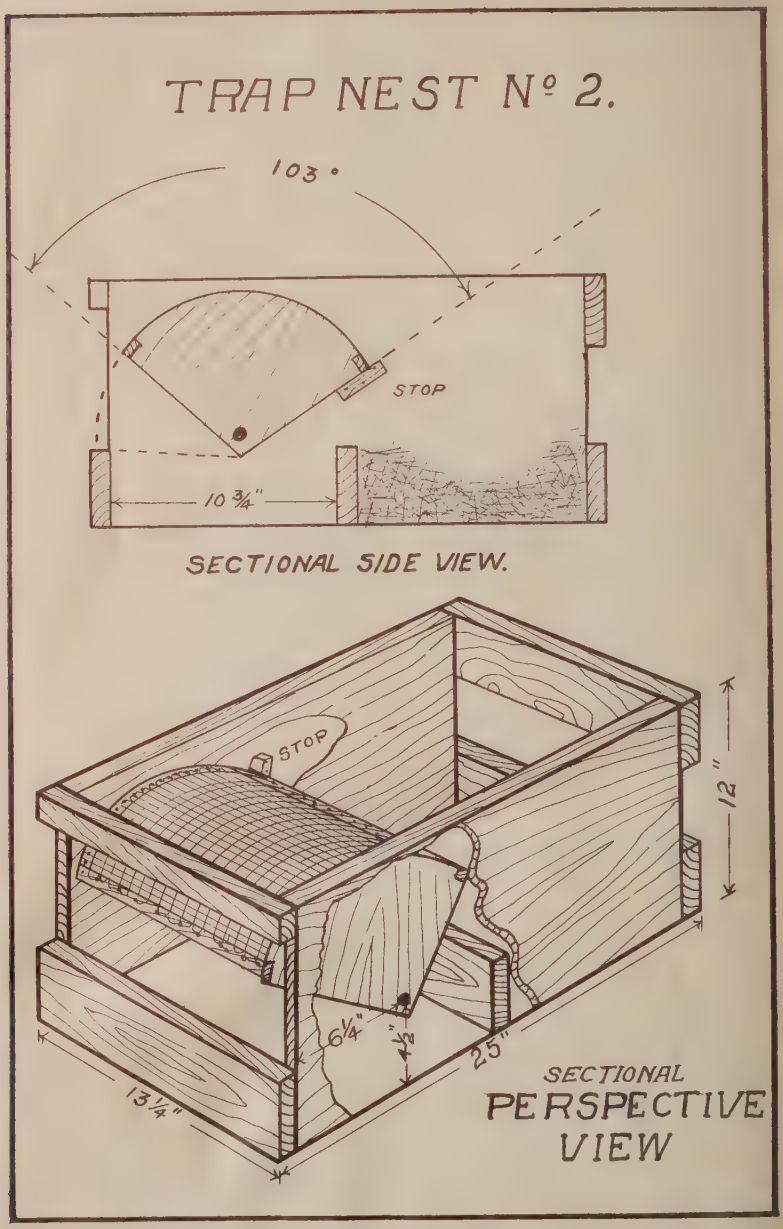
ILLUSTRATING THE METHOD OF CONSTRUCTION OF THE OPEN NEST

of the floor space dark. The open wall nests, as shown in the accompanying plans, are very satisfactory and well adapted to most conditions. They may be made with open backs, where the wall of the house is such as to answer for the backs of the nests.

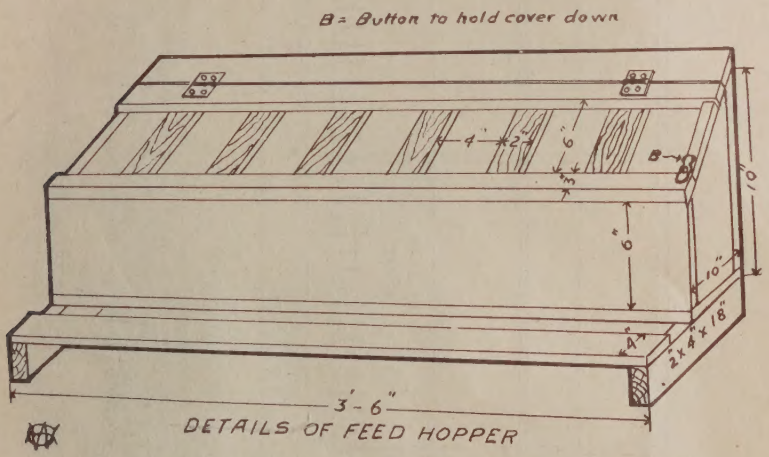


TRAP NEST NO. 1

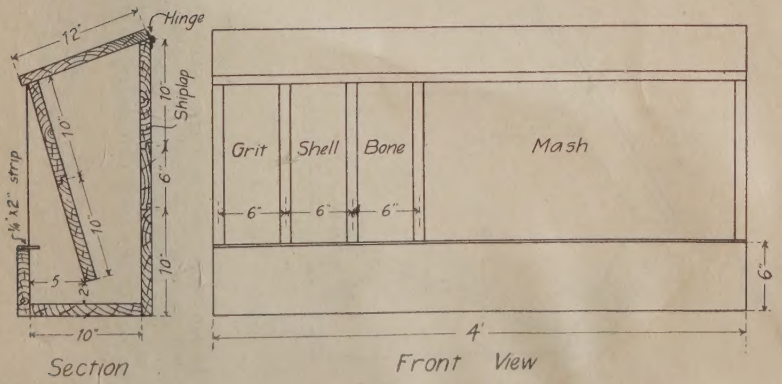
Above: End Section of the Nest. Below: Front View.


TRAP NEST Nº 2.
103°
STOP
10 3/4"
SECTIONAL SIDE VIEW.
STOP
12"
6 1/4"
4 1/2"
25"
13 1/4"
SECTIONAL
PERSPECTIVE
VIEW

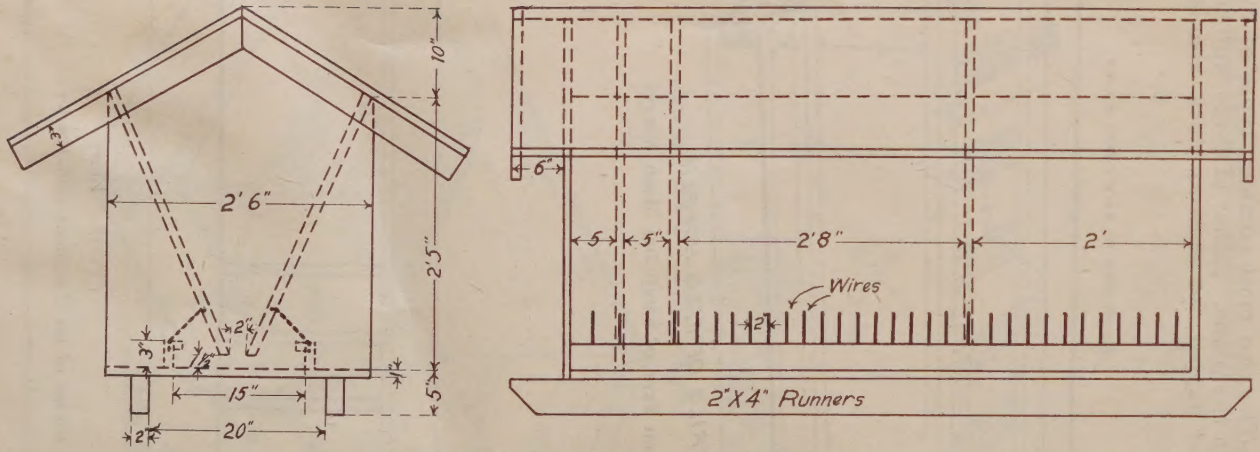
Feed Hoppers—The two most common types of dry mash hopper are shown in the plans. Either of these will give good results. The outdoor hopper, for growing stock, also is shown.



Common Type of Small Dry Mash Hopper



Two Views of an Excellent Self-Feeder



OUTDOOR FEED HOPPER, CORNELL TYPE

At left, end view; at right, side view. This hopper is used for growing stock after they are out of the brooder and are put on range. It feeds dry mash, grain, charcoal and ground bone. It is filled as often as necessary and chicks are allowed free access to it at all times. This method of feeding reduces the labor of caring for young stock and they develop rapidly when it is used. The hopper is shown as six feet long, which is a size sufficient for 300 young chicks. It may be built of any length, according to the size of flock. Construction should not be altered, except as to length.

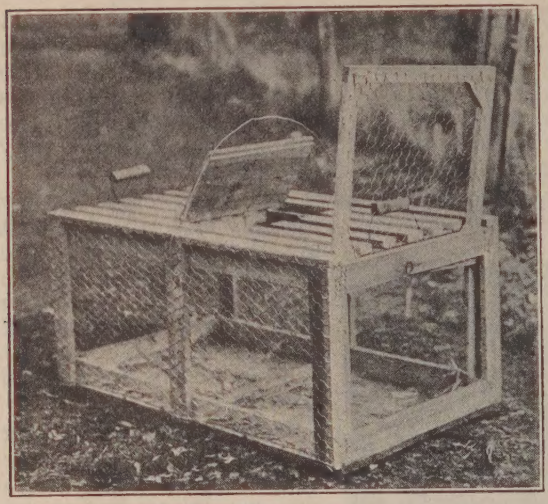
Water Pans—Under most conditions, the water or milk can be given in ordinary open pans, buckets or crocks, which are placed away from the floor on a slatted platform. The water vessels should be easily cleaned and as sanitary as it is possible to procure. They should be cleaned and the platform disinfected often, as this "public drinking cup" may be the means of spreading disease in the flock.

Stand for Water Pans—The cut shows a very satisfactory type of platform for water vessels. This may be built of almost any size, according to the number of fowls to be served by it. It should be built about two feet off the ground, so as to permit free use of the floor space beneath it.

STAND FOR WATER PAN

Broody Coops—During the spring and summer months there always are some broody hens that are not wanted for setting and if these are "broken up" immediately, they will return to laying in a short time. An efficient broody coop may materially increase the egg production of summer and fall. A coop for this purpose may be built in the house, or may be placed outside in the shade of a tree. The most important features of a broody coop are that it shall be up away from the ground and that it shall have the bottom slatted. If it is put outside the house, a roof should be provided to protect the hens from the rain. Provide feed and water in the coop, so that the hens will be in good condition when turned out and thus go to laying much sooner than if they have been half starved while in the coop. If put in the broody coop the first night she is found on the nest, the average hen will be "broken up" in from four to six days, and will be back to laying in from one to two weeks.

Catching Coops—The catching coop, as shown in the photograph, is a very valuable appliance on any poultry farm. Hens



THE CATCHING COOP

should be caught for lice treatment, culling, etc., and this coop makes the catching comparatively easy. By having a partition in the house, running all the hens to one side and having a small opening between the pens, the hens can be chased through the opening into the coop until the coop is full, these treated and another coop-ful caught in the same way until all the hens have been handled. If there is no partition in the house, they can be handled similarly outside the house, and released when treated.

Catching Hook—A catching hook is also a valuable appliance, as many times an individual hen may be desired and she can be picked up easily by the use of the hook. The catching hook is simply a piece of heavy wire with a hook about two inches long and one-half inch wide (depending on the size of hens to be caught) in one end of it. The point of the hook should be bent out at an angle, so as to make it slip on the hen's leg. The best hook is made by using a wire about two feet long and fastening it to an old broom handle about three feet long.

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